Work Order ID 74693

Wednesday, October 05, 2011 10:27:52 AM

Item ID: D205-634-041 **Accept** **Setup Start**

Revision ID: **Stop**

Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 10/21/2011 **Req'd Qty:** 1.00 **Customer:**

Reference:

Approvals: **Process Plan:** M.L.J **Date:** 11/10/05 **Tooling:** _____ **Date:** _____ **Run Start**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D2580-041	~~Rev.D DEO-DT~~ E M 11.10.05								
100		0.00							
DC	DOCUMENT CONTROL					N/A			
Document Control	**Memo**	0.00							
	Photocopy D205-634 bluefile & type labels per PPP D205-634-041 . CHG002								
110		0.00							
CNC Bend 1	BENDING MACHINE - SKIDTUBES								
CNC Delta 100 Bender	**Memo**	0.00							
	1-Bend as per program D2580.C on CNC Bender and Folio 16								
	2-Cut tubes as per Dwg. D2580								
	3- scribe batch# in aft end of tube								

11-10-19

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 74693

Wednesday, October 05, 2011 10:27:52 AM

Item ID: D205-634-041 **Accept**

Revision ID:

Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Start Qty:** 1.00

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Reference:

Cust Item ID:

Customer:

Setup Start **Stop**

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00				(1)	3	11/10/22	
Skidtubes	**Memo**	0.00							
Skidtubes	1- Deburr ends and remove bending marks 2- Prepare tube for welding as per QSI 004								
130	QC5- Inspect part completeness to step on W/O	0.00				(1)	0	BE 11/10/25	
QC	**Memo**	0.00							
Quality Control									

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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NOTE: Date & initial all entries

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Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140		0.00							
Skidtubes									
Skidtubes	**Memo**	0.00							

1-Weld step D2576 as per Dwg. D2580 and QSI 004
A/R□□□ Aluminum Rod MIL8736 BE 11/10/25

2-Grind welds on step as per Dwg D2580

3-Weld spacers as per dwg D2580 A/R MIL8736 BE 11/10/25

3- *** N/A**** Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002 and dwg. Hold x-bolt with DT9701 Use tube expander 1/2 x17G to start expantion and finish with 1/2 x 18G to achieve dwg dimention.
GRIND WELDS

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web.Deburr BE 11/10/26

6-Drill pilot holes for aft cap using DT 8215Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640"and Deburr BE 11/10/26

C-Bore DP 11-10-26

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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NOTE: Date & initial all entries

Work Order ID 74693

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Item ID: D205-634-041 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Start Qty:** 1.00 **Cust Item ID:**

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Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC10- Inspect visual per QSI004- ground welds	0.00							
QC	**Memo**	0.00							
Quality Control									
160	QC5- Inspect part completeness to step on W/O	0.00							
QC	**Memo**	0.00							
Quality Control									
170	Pressure Wash per QSI005 4.3	0.00							
HandFinish	**Memo**	0.00							
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.								

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

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Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Stop**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 Powdercoat	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
Powder Coating	**Memo** START TIME: 7:50 OVEN TEMPERATURE: 320°F FINISH TIME: 8:20	0.00							
190 QC Quality Control	QC3- Inspect Part Finish	0.00							
	Memo	0.00							

M117745

1X Ø M 11/10/28

1 BL 11-11-2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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Work Order ID 74693

Wednesday, October 05, 2011 10:27:52 AM

Item ID: D205-634-041 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 10/21/2011 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00				1		11-11-2.	
HandFinish		0.00							
Hand Finishing									

Memo

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates
A/R ☐☐☐ Sikaflex-291 ☐ 119299.
Sikaflex expire date: 12-8

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive
A/R ☐ ☐☐ Sikaflex-291 ☐ 119299 ☐☐☐
Sikaflex expire date 12-8

5-Wing Walk as per Dwg D2580 and QSI 005 4.4
Batch: 115988

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W/O:		WORK ORDER CHANGES					
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Work Order ID 74693

Wednesday, October 05, 2011 10:27:52 AM

Item ID: D205-634-041 **Accept** **Setup Start**

Revision ID: **Stop**

Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 10/21/2011 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Stop**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	QC5- Inspect part completeness to step on W/O	0.00							
QC	**Memo**	0.00							
Quality Control	Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024								
220		0.00							
Packaging	Packaging								
Packaging	**Memo**	0.00							
	Identify and pack for shipping as per PPPD205-634-041 Location: PPP 74864 PPP Rev:								
230	QC21- Final Inspection - Work Order Release	0.00							
QC	**Memo**	0.00							
Quality Control									

11-11-02 (1)

11/11/14

MF 11-11-14

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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NOTE: Date & initial all entries

Picklist Print

Wednesday, October 05, 2011 10:27:56 AM

Work Order ID: 74693

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Required Date:** 10/21/2011

Start Qty: 1.00 **Required Qty:** 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30
KJ IPP Rev P 10.02.19
per PAR09-043 EC verified by:DD
IPP Rev. O 06.02.28 Added paperwork EC
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q
10.12.01 as per chg003 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
~~D4202-1~~ D2579		Manufactured	No			140	Each	443.0000	20	20			
Spacer													

Location	Loc Qty	Loc Code
LG002	443	
66929	106	
67129	196	
67308	1	
67430	140	

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2580-1		Manufactured	No			110	Each	1.0000	1	1			
205 Skidtube bent detail													

Location	Loc Qty	Loc Code
LG 73707	1	
72965	1	

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2576-3		Manufactured	No			140	Each	71.0000	1	1			
Step (maching detail)													

Location	Loc Qty	Loc Code
LG	71	
66156	21	
70883	50	

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

Wednesday, October 05, 2011 10:27:56 AM

Work Order ID: 74693

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Required Date:** 10/21/2011

Start Qty: 1.00 **Required Qty:** 1.00

D2855	Manufactured	No		200	Each	18.0000	1	1
Cap								BR 11-11-2

Location	Loc Qty	Loc Code	
FP007	18		
65519 ✓	2		
65569 ✓	16		1

AN3-5A	Purchased	No		200	Each	886.0000	2	2
Bolt								BR 11-11-2

Location	Loc Qty	Loc Code	
ST350	886		
115371	46		
117423 ✓	540		2
118626	300		

AN960JD10L ✱ NAS1149D0332J ✓	Purchased	No		200	Each	0.0000	2	2
Washer			117087					2 BR 11-11-2.

ALS7-1032-130	Purchased	No		200	Each	1,255.000	50	50
Insert								BR 11-11-2.

Location	Loc Qty	Loc Code	
ST281	1000		
118966 ✓	1000		50.
ST282	255		
117717	109		
118386	146		

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W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Picklist Print

Wednesday, October 05, 2011 10:27:57 AM

Work Order ID: 74693

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Required Date:** 10/21/2011

Start Qty: 1.00 **Required Qty:** 1.00

AN3C4A	Purchased	No		200	Each	2,147.000	50	50

BOLT

BR 11-11-2

Location	Loc Qty	Loc Code	
ST350	2147		
117313	2		
117688	5		
117872	22		
118112	16		
118451	602		
118706	500		50
118838	1000		

AN960C10L	NAS1149C0332R	Purchased	No		200	Each	0.0000	50	50

washer

118354

50 BR 11-11-2.

D3566-13	Manufactured	No		200	Each	40.0000	1	1

Gasket

BR 11-11-2

Location	Loc Qty	Loc Code	
FP	29		
73322	29		
FP014	11		
68341	1		
72149	10		1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 74693

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Required Date:** 10/21/2011

Start Qty: 1.00 **Required Qty:** 1.00

D3566-5	Manufactured	No		200	Each	18.0000	1	1

Gasket

BR 11-11-2

Location	Loc Qty	Loc Code	
FP002	12		
74387 ✓	12		1
FP015	6		
72849	6		

D3566-1	Manufactured	No		200	Each	27.0000	2	2

Gasket

BR 11-11-2

Location	Loc Qty	Loc Code	
FP002	25		
73303 ✓	25		2
FP015	2		
68924	2		

D3564-11	Manufactured	No		200	Each	14.0000	1	1

Wearshoe

BR 11-11-2

Location	Loc Qty	Loc Code	
FP019	12		
73146 ✓	12		1
FP020	2		
72207	2		

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Required Date:** 10/21/2011

Start Qty: 1.00 **Required Qty:** 1.00

D3564-13	Manufactured	No		200	Each	26.0000	1	1	BR 11-11-2
Wearshoe									

Location	Loc Qty	Loc Code	
FP001	25		
72850	7		1
73323	18		
FP017	1		
71594	1		

D3564-9	Manufactured	No		200	Each	24.0000	1	1	BR 11-11-2
Wearshoe									

Location	Loc Qty	Loc Code	
FP	19		
73345	19		1
FP019	5		
67590	4		
69943	1		

D3564-5	Manufactured	No		200	Each	20.0000	1	1	BR 11-14-2
Wearshoe									

Location	Loc Qty	Loc Code	
FG	2		
34806	2		
FP19	18		
73330	18		1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

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NOTE: Date & initial all entries

Work Order ID: 74693

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 10/5/2011 **Required Date:** 10/21/2011

Start Qty: 1.00 **Required Qty:** 1.00

D2594-3	Manufactured	No	200	Each	884.0000	16	16	BR 11-11-2

O-Ring, 205 Skidtube

Location	Loc Qty	Loc Code	
FP004	198		
73490	198		
FP-A	686		
65518	41		
66952	347		16.
73490	298		

D2594-1	Manufactured	No	200	Each	254.0000	16	16	BR 11-11-2

Plug, 205 Skidtube

Location	Loc Qty	Loc Code	
FP	172		
73401	172		16.
FP-A	82		
42807	28		
67441	7		
72127	47		

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

LIST OF MATERIALS

ITEM	QTY -041	QTY -045	QTY -047	PART NUMBER	DESCRIPTION
1	X			D2580-041	SKIDTUBE ASSEMBLY
2		X		D2580-045	SKIDTUBE ASSEMBLY
3			X	D2580-047	SKIDTUBE ASSEMBLY
4	1	1	1	D2500-1-190	EXTRUSION
5			16	D2570	BUSHING
6	1	1	1	D2576-3	STEP
7	20	24	25	D2579	SPACER
8	16	16	8	D2594-1	PLUG
9	16	16	8	D2594-3	O-RING
10	1	1	1	D2596	205 WEB
11	1	1	1	D2855	AFT CAP
12	1	1		D3564-5	WEARSHOE
13	1	1		D3564-9	WEARSHOE
14	1	1		D3564-11	WEARSHOE
15	1	1		D3564-13	WEARSHOE
16	2	2		D3566-1	GASKET
17	1	1		D3566-5	GASKET
18	1	1		D3566-13	GASKET
19			1	D4406-041	WEARPLATE ASSEMBLY
20			1	D4406-043	WEARPLATE ASSEMBLY
21	50	50		ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
22	50	50		AN3C4A	BOLT
23	2	2	2	AN3-5A	BOLT
24			8	AN4-45A	BOLT
25	50	50		NAS1149C0332R	WASHER (AN960C10L)
26	2	2	2	NAS1149D0332J	WASHER (AN960JD10L)
27			8	MS21042-4	NUT (OR MS21042L4)

GENERAL NOTES:

1) MATERIAL: N/A
2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
 POWDER COAT ASSEMBLY (-041/-047) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
 POWDER COAT ASSEMBLY (-045) GREEN SANDEX (REF 4.3.5.8) PER DART QSI 005 4.3
 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4.
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
4) UNITS: INCHES UNLESS OTHERWISE NOTED.
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
6) IDENTIFICATION: NONE
7) WEIGHT: D2580-041 = 34.5 lbs
 D2580-045 = 34.5 lbs
 D2580-047 = 37.7 lbs
8) WELDING PER DART QSI 004.
9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
11) USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/-291.
12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047)
13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

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2011-08-29

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WORK ORDER
NO. ~~74693~~ 74693 M.L.J
11/10/05

REV.	DESCRIPTION	BY	DATE
E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.26
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.16

DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED		DRAWING NO. D2580 — REV. E — SHEET 1 OF 8
MFG. APPR.		
APPROVED		TITLE: 205 SKIDTUBE ASSEMBLY — SCALE: NTS
DE APPR.		
DATE	11.06.21	

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

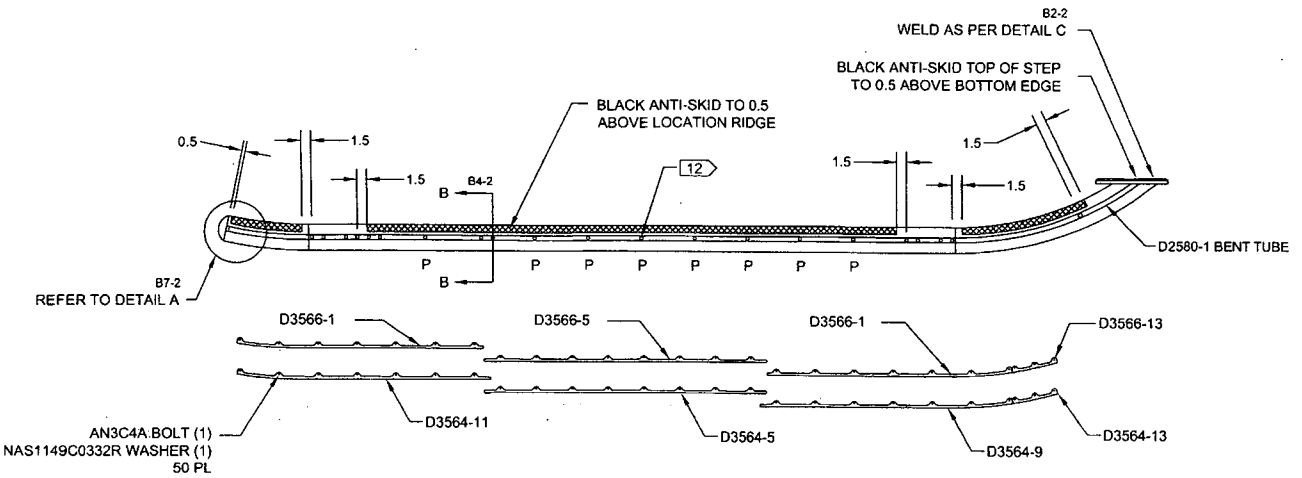
Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

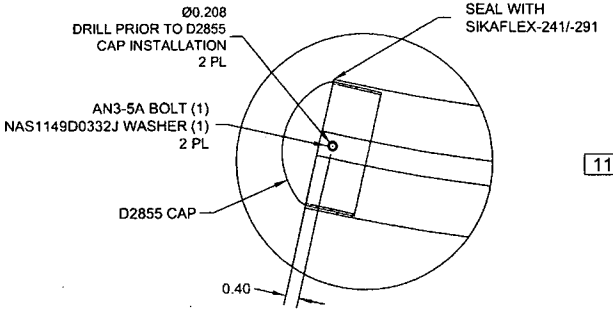
74693



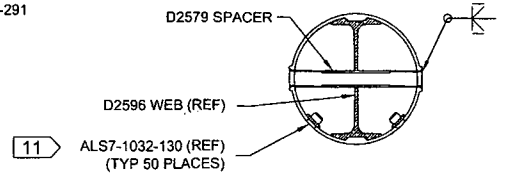
D2580-041 ASSEMBLY DETAIL

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DETAIL A C7-2
SCALE 5X

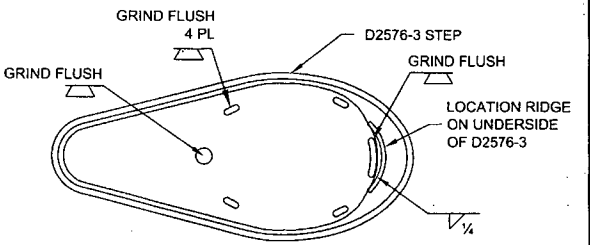


SECTION B-B D5-2
SCALE 5X



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DETAIL C D3-2
SCALE 5X



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CHECKED		DRAWING NO. D2580 — REV. E — SHEET 2 OF 8
MFG. APPR.		
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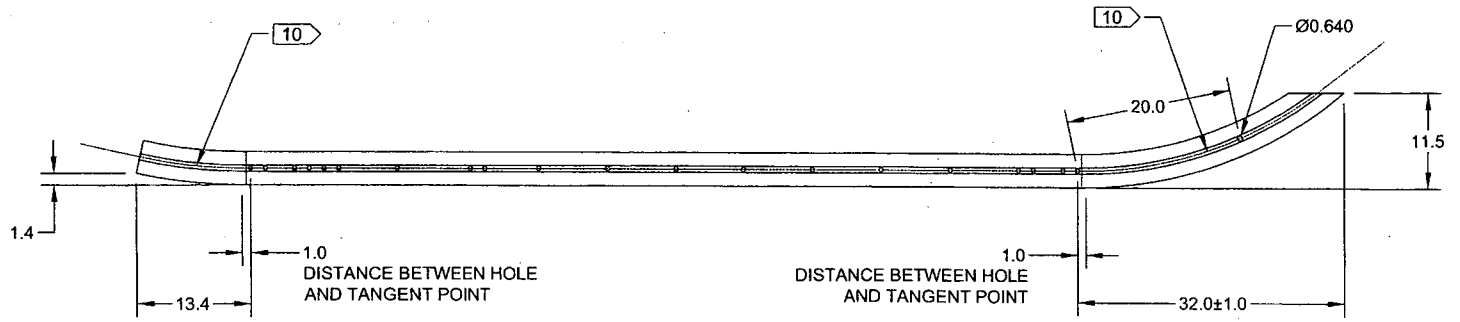
Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

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D2580-1 BENT TUBE
(MAKE FROM D2580-101 TUBE)

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MFG. APPR.		D2580	SHEET 3 OF 8
APPROVED		TITLE	SCALE
DE APPR.		205 SKIDTUBE ASSEMBLY	NTS
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DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

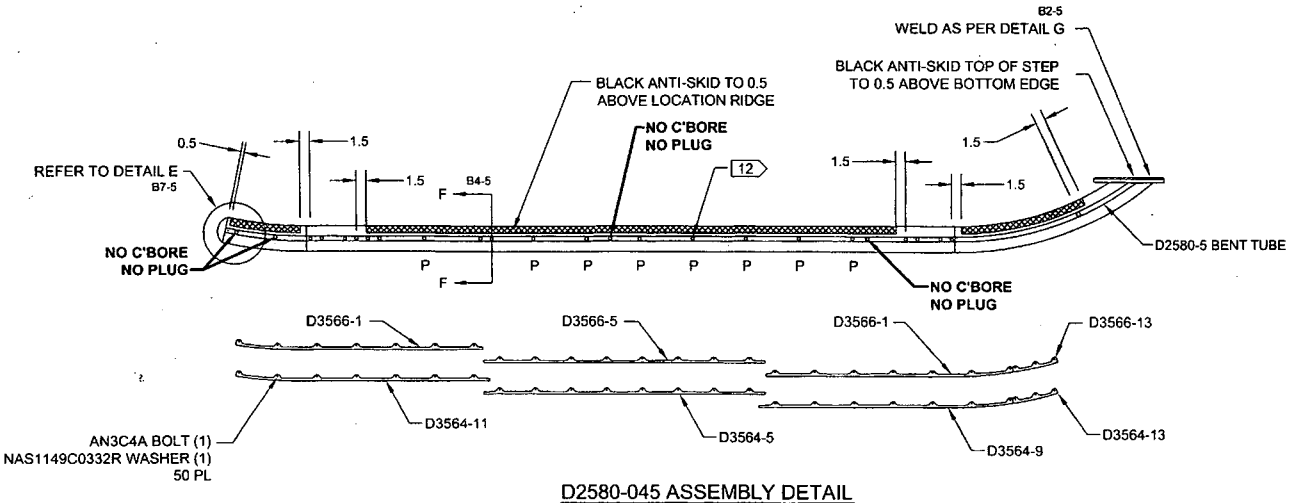
Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

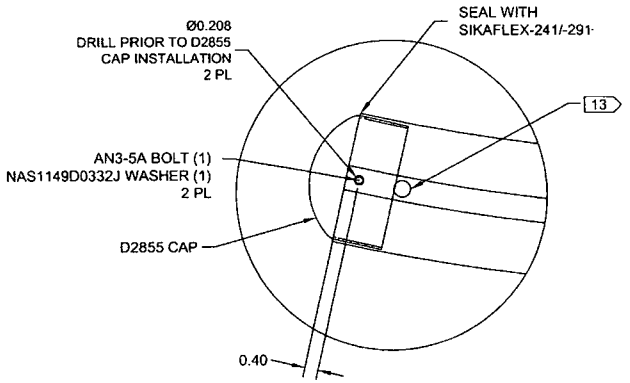
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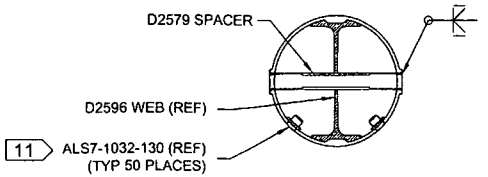
D2580-045 ASSEMBLY DETAIL

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2011 -08- 29

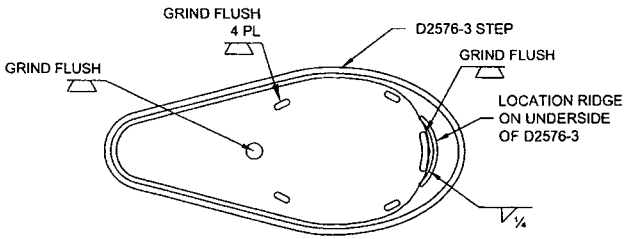
DETAIL E D7-5
SCALE 5X



SECTION F-F D5-5
SCALE 5X



DETAIL G D3-5
SCALE 5X



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (24 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
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CHECKED		DRAWING NO. D2580 — REV. E — SHEET 4 OF 8
MFG. APPR.		
APPROVED		TITLE: 205 SKIDTUBE ASSEMBLY — SCALE: NTS
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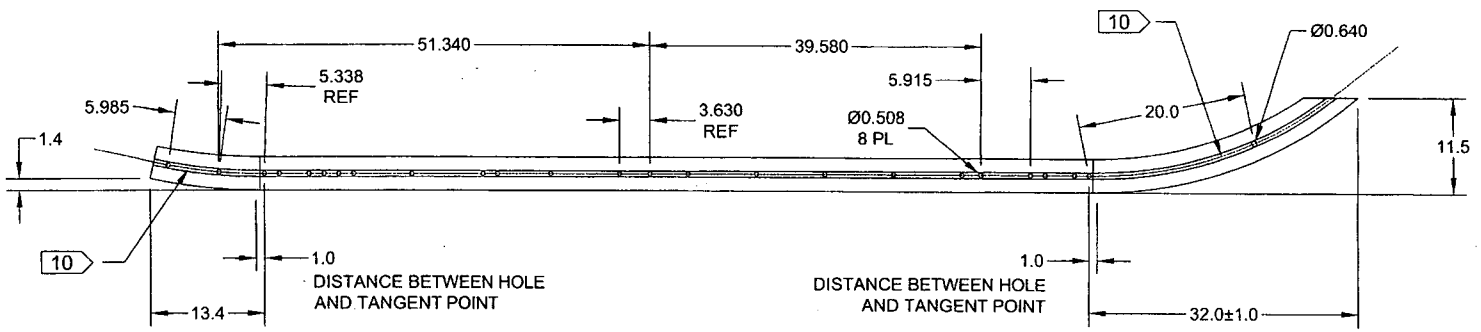
Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

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D2580-5 BENT TUBE
(MAKE FROM D2580-101 TUBE)

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MFG. APPR.		D2580	SHEET 5 OF 8
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DE APPR.		205 SKIDTUBE ASSEMBLY	NTS
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DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

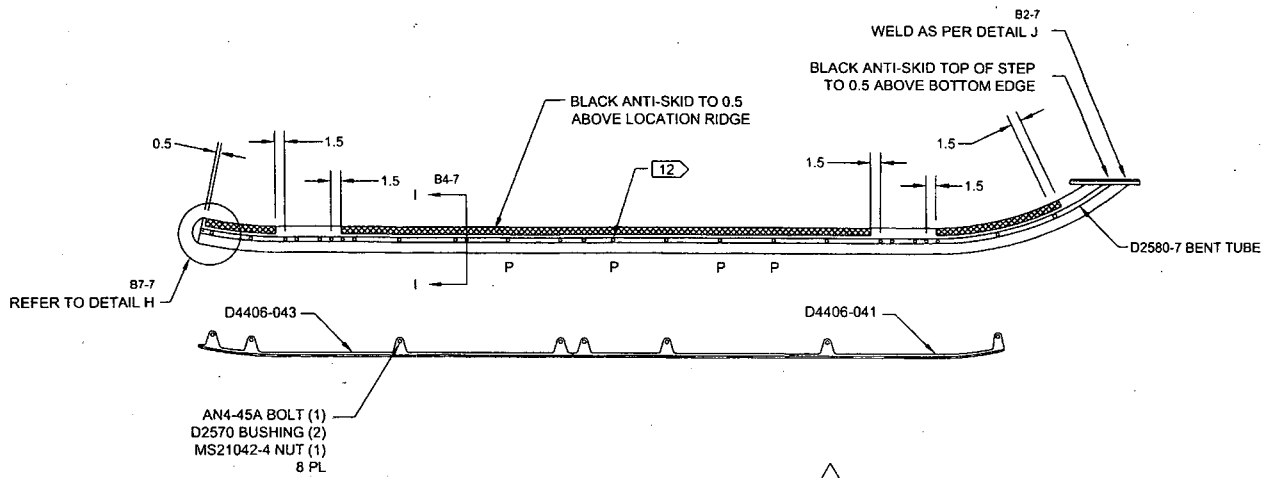
Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

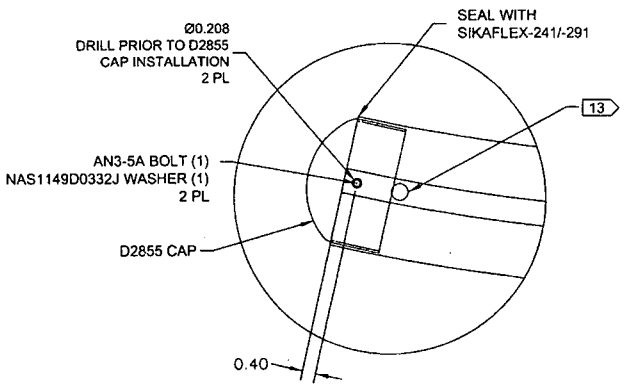
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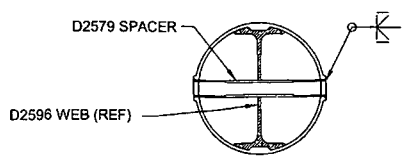
D2580-047 ASSEMBLY DETAIL (E)

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2011 -08- 29

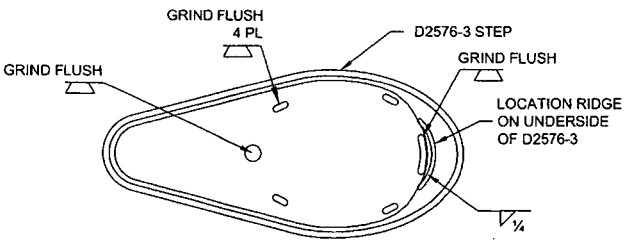
DETAIL H C6-7
SCALE 5X



SECTION I-I D5-7
SCALE 5X



DETAIL J D3-7
SCALE 5X



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (25 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DESIGN		**DART AEROSPACE LTD**	
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CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D2580	SHEET 6 OF 8
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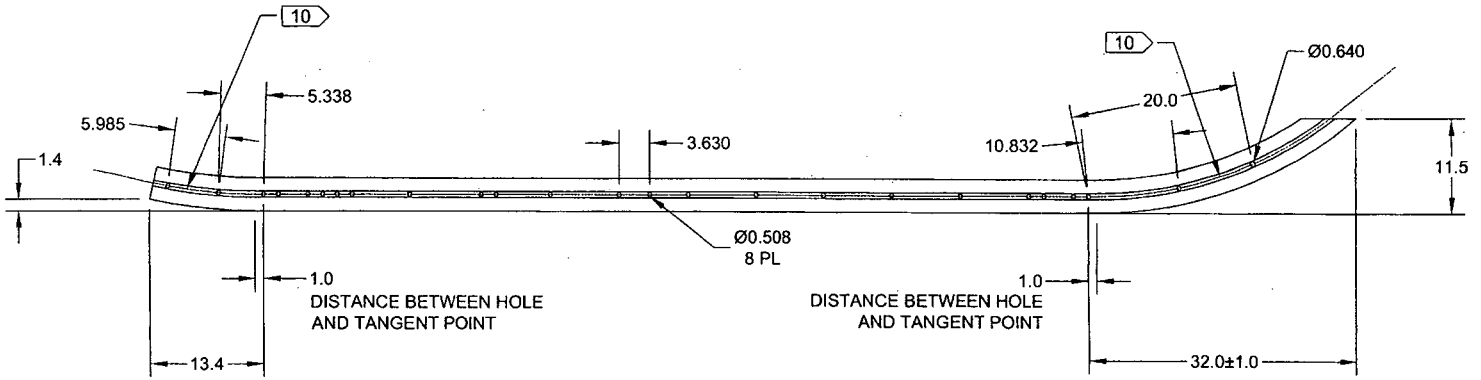
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Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

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D2580-7 BENT TUBE
(MAKE FROM D2580-101 TUBE) E

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DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED		DRAWING NO. D2580 — REV. E — SHEET 7 OF 8
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APPROVED		TITLE: 205 SKIDTUBE ASSEMBLY — SCALE: NTS
DE APPR.		
DATE	11.06.21	

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

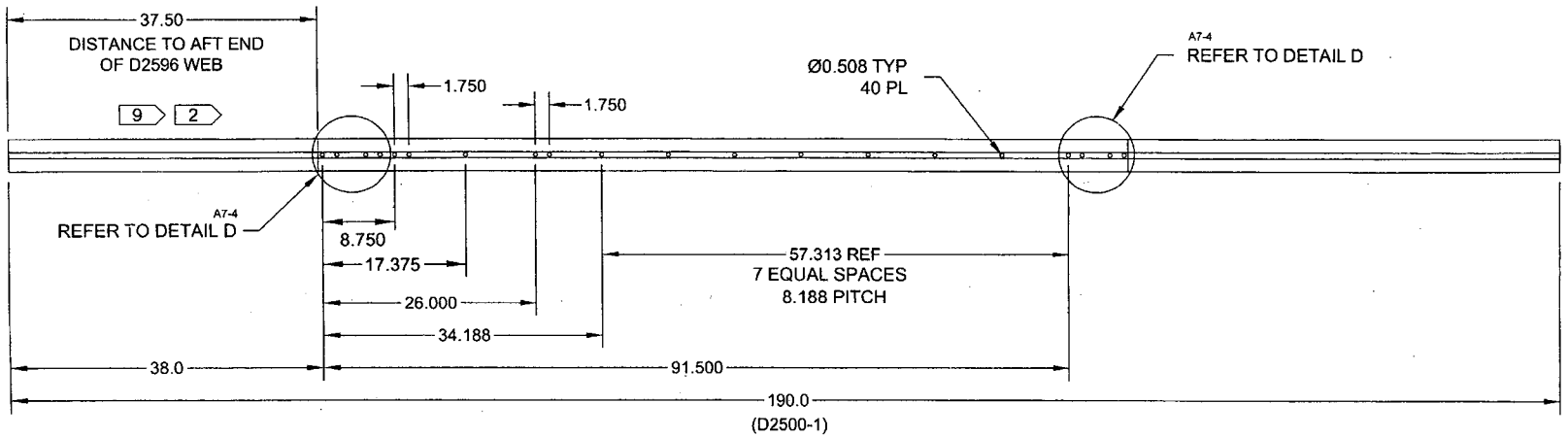
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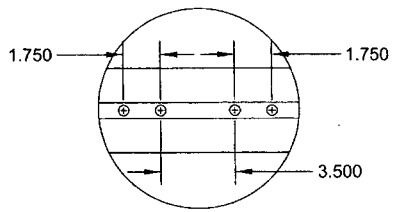
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DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

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D2580-101 TUBE



DETAIL D (D3-4, C7-4)
SCALE 5X

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DESIGN		DART AEROSPACE LTD	
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CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D2580	SHEET 8 OF 8
APPROVED		TITLE	SCALE
DE APPR.		205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21		

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Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

NO. 271

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 72859
Part number: 1205-634-041
Description: 205 Skidtube
Welding Process: Tig[X] Mig[]
Base materiel: Aluminum
Current: AC[X] DC[]

TEST REQUIREMENTS AND RESULTS

Visual:	pass[X]	fail[]
Penetration:	pass[X]	fail[]

UNACCEPTABLE

Cracks:	pass[X]	fail[]
Undercut:	pass[X]	fail[]
Pin holes:	pass[X]	fail[]
Overlap (cold lap)	pass[X]	fail[]
Porosity (surface):	pass[X]	fail[]
Coloration:	pass[X]	fail[]

Qualifier Pat Lunn **Date of Test Coupon** 11-10-12

Welder Barclay Elliott **Date of Test Coupon** 11-10-12

The above named individual is qualified in accordance with AWS D17.1.2001 to weld